

What is claimed is:

1 1. In a virtual local area network (VLAN) environment, a method for
2 modifying the handling of packet data within the VLAN environment comprising the
3 steps of:

4 a VLAN aware device receiving a data packet;
5 examining a plurality of attributes associated with the data packet; and
6 modifying a priority queue of the data packet in relation to the nature of
7 said attributes.

1 2. The method of claim 1 wherein one of the attributes examined in the step
2 of examining a plurality of attributes associated with the data packet is a port
3 number in a transport layer.

1 3. The method of claim 1 wherein one of the attributes examined in the step
2 of examining a plurality of attributes associated with the data packet is a type of
3 service used in a network layer.

1 4. The method of claim 1 wherein one of the attributes examined in the step
2 of examining a plurality of attributes associated with the data packet is a protocol of
3 a network layer.

1 5. The method of claim 1 wherein one of the attributes examined in the step
2 of examining a plurality of attributes associated with the data packet is a priority tag.

1 6. The method of claim 1 wherein one of the attributes examined in the step
2 of examining a plurality of attributes associated with the data packet is network
3 traffic load.

1 7. The method of claim 1 wherein the step of modifying the priority queue of
2 the data packet moves the data packet to a lower priority queue.

1 8. The method of claim 1 wherein the step of modifying the priority queue of
2 the data packet moves the data packet to a higher priority queue.

1 9. The method of claim 1 wherein the step of modifying the priority queue of
2 the data packet keeps the data packet in the same priority queue.

1 10. The method of claim 1 wherein the step of modifying the priority queue of
2 the data packet further includes the step of applying weighting factors to selected
3 attributes associated with said data packets.

1 11. The method of claim 10 wherein said weighting factors are determined
2 according to values of selected attributes associated with said data packets.

1 12. The method of claim 1 wherein said steps are preformed dynamically as
2 data packets are received at said VLAN aware device.

1 13. In a virtual local area network (VLAN) aware device, a module for
2 modifying the handling of packet data within the VLAN environment, said module
3 comprising:

4 means for receiving a data packet;

5 means for examining a plurality of attributes associated with the data packet;

6 and

7 means for modifying the priority queue of the data packet in relation to the
8 nature of said attributes.

1 14. The module of claim 13 wherein one of the attributes examined in the
2 means for examining a plurality of attributes associated with the data packet is a
3 port number in a transport layer.

1 15. The module of claim 13 wherein one of the attributes examined in the
2 means for examining a plurality of attributes associated with the data packet is a
3 type of service used in a network layer.

1 16. The module of claim 13 wherein one of the attributes examined in the
2 means for examining a plurality of attributes associated with the data packet is a
3 protocol of a network layer.

1 17. The module of claim 13 wherein one of the attributes examined in the
2 means for examining a plurality of attributes associated with the data packet is a
3 priority tag.

1 18. The module of claim 13 wherein one of the attributes examined in the
2 means for examining a plurality of attributes associated with the data packet is
3 network traffic load.

1 19. The module of claim 13 wherein the means for modifying the priority
2 queue of the data packet moves the data packet to a lower priority queue.

1 20. The module of claim 13 wherein the means for modifying the priority
2 queue of the data packet moves the data packet to a higher priority queue.

1 21. The module of claim 13 wherein the means for modifying the priority
2 queue of the data packet keeps the data packet in the same priority queue.

1 22. The module of claim 13 wherein the means for modifying the priority
2 queue of the data packet further includes means for applying weighting factors to
3 selected attributes associated with said data packets.

1 23. The module of claim 22 wherein said weighting factors are determined
2 according to values of selected attributes associated with said data packets.

1 24. In a virtual local area network (VLAN) environment, a program product for
2 modifying the handling of packet data within the VLAN environment, said program
3 product comprising:

4 logic means for receiving a data packet;

5 logic means for examining a plurality of attributes associated with the data
6 packet; and

7 logic means for modifying the priority queue of the data packet in relation to
8 the nature of said attributes.

1 25. The program product of claim 24 wherein one of the attributes examined
2 in the logic means for examining a plurality of attributes associated with the data
3 packet is a port number in a transport layer.

1 26. The program product of claim 24 wherein one of the attributes examined
2 in the logic means for examining a plurality of attributes associated with the data
3 packet is a type of service used in a network layer.

1 27. The program product of claim 24 wherein one of the attributes examined
2 in the logic means for examining a plurality of attributes associated with the data
3 packet is a protocol of a network layer.

1 28. The program product of claim 24 wherein one of the attributes examined
2 in the logic means for examining a plurality of attributes associated with the data
3 packet is a priority tag.

1 29. The program product of claim 24 wherein one of the attributes examined
2 in the logic means for examining a plurality of attributes associated with the data
3 packet is network traffic load.

1 30. The program product of claim 24 wherein the logic means for modifying
2 the priority queue of the data packet moves the data packet to a lower priority
3 queue.

1 31. The program product of claim 24 wherein the logic means for modifying
2 the priority queue of the data packet moves the data packet to a higher priority
3 queue.

1 32. The program product of claim 24 wherein the logic means for modifying
2 the priority queue of the data packet keeps the data packet in the same priority
3 queue.

1 33. The program product of claim 24 wherein the logic means for modifying
2 the priority queue of the data packet further includes means for applying weighting
3 factors to selected attributes associated with said data packets.

1 34. The program product of claim 33 wherein said weighting factors are
2 determined according to values of selected attributes associated with said data
3 packets.